

Remarks

The Office Action mailed May 15, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-35 and 37-45 are now pending in this application. Claims 7-34, 37, and 39-45 have been withdrawn. Claims 4-6 and 38 have been allowed. Claim 36 has been canceled. Claims 1-3 and 35-36 stand rejected.

The rejection of Claims 35 and 36 under 35 U.S.C. § 112, second paragraph, as being indefinite is respectfully traversed. Claim 36 has been canceled and Applicants have amended Claim 35 to address the issue raised in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claims 35 and 36 be withdrawn.

The rejection of Claims 1-3 under 35 U.S.C. § 103(a) as being unpatentable over Devreotes et al. (U.S. Patent Application Publication 2002/0048811) (hereinafter referred to as “Devreotes”) in view of Wittamer et al. (U.S. Patent Application Publication 2003/0104478) (hereinafter referred to as “Wittamer”) is respectfully traversed.

Devreotes describes activation of heterotrimeric G-proteins that is visualized in living cells by monitoring a fluorescence resonance energy transfer (FRET) between subunits of G-protein fused to cyan and yellow fluorescent proteins. Wittamer describes screening assays for the identification of candidate compounds and G-protein coupled receptor signaling. Notably, neither Devreotes nor Wittamer, considered alone or in combination, describes or suggests a biosensor including mammalian G protein subunits that include a mammalian subunit including a first amino acid sequence encoding a first fluorescent and/or a luminescent protein and/or a mammalian subunit including a second amino acid sequence encoding a second fluorescent and/or luminescent protein.

Claim 1 recites a mammalian functional biosensor comprising “mammalian G protein subunits fused to at least one of a cyan fluorescent protein and yellow fluorescent protein respectively and capably enabled for fluorescence resonance energy transfer, wherein the mammalian G protein subunits comprise at least one of a mammalian subunit comprising a

first amino acid sequence encoding at least one of a first fluorescent or a luminescent protein and a mammalian subunit comprising a second amino acid sequence encoding at least one of a second fluorescent and luminescent protein.”

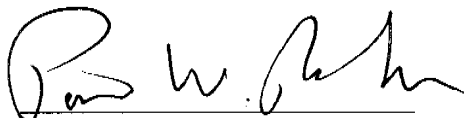
Neither Devreotes nor Wittamer, considered alone or in combination, describes a biosensor as recited in Claim 1. More specifically, neither Devreotes nor Wittamer, considered alone or in combination, describes or suggests a biosensor including mammalian G protein subunits that include a mammalian subunit including a first amino acid sequence encoding a first fluorescent and/or a luminescent protein and/or a mammalian subunit including a second amino acid sequence encoding a second fluorescent and/or luminescent protein. Rather, Devreotes merely describes visualizing activation of heterotrimeric G-proteins in living cells by monitoring a fluorescence resonance energy transfer (FRET) between subunits of G-protein fused to cyan and yellow fluorescent proteins; and Wittamer merely describes screening assays for the identification of candidate compounds and G-protein coupled receptor signaling. Accordingly, Claim 1 is submitted to be patentable over Devreotes in view of Wittamer.

Claims 2 and 3 depend from Claim 1. When the recitations of Claims 2 and 3 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2 and 3 likewise are patentable over Devreotes in view of Wittamer.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-3 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Patrick W. Rasche', written over a horizontal line.

Patrick W. Rasche
Registration No. 37,916
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070